

Emerson Gas Detection Platform Ideally Suited for O&G Vacuum/Pressure Washer Trucks

Background

Vacuum trucks are often used to remove water around sub-surface pipes (or any type of underground equipment) in the oil and gas industry to conduct maintenance. Quite often, this water is contaminated with hydrocarbons (and potentially entrained H₂S), and there is an inherent risk of dangerous gas release while the water is being disturbed.

Application Principles

In the case of LEL gases, the truck itself would present a source of ignition, but in addition within this application the vacuum truck is also equipped with a pressure washer which has a burner system to heat the water. This system is typically part of the exterior system and could easily ignite flammable gases in the area.

In order to mitigate the risks associated with the burner system, relay contacts from the detector can be configured to automatically shut off the burners in the event that hazardous LEL gases are picked up by a detector. Historically, service teams have used a “safety watch” with a personal monitor, but fixed gas detection has three key benefits:

1. Two points of detection vs the single personal gas detector
2. Automatic shut-down is quicker and eliminates the human element (analysis of the situation and eventual reaction)
3. Eliminates requirement for a safety watch

Solution

Infrared sensors are more resistant to vibration than catalytic bead sensors which can be damaged due to vibration (such as mounted on a truck). IR sensors also have greater immunity to the effects of rapid temperature changes than catalytic bead, as the sensors are calibrated in a heated shop, then immediately exposed to field conditions during winter months.

The Millennium II Series of transmitters are designed for low power consumption with a wide voltage range which allows them to easily utilize the vehicle’s existing electrical and power system. The unique dual channel option allows for greater coverage and continuous



detection of both toxic and combustible gases should that be a requirement. Additionally, with our SMART sensor technology, any LEL sensor can be quickly converted to H₂S detection for sour applications and vice versa. This is a truly universal platform, any of our four sensor technologies (Infrared, Electrochemical, NE-MOS or Catalytic Bead) can be connected to any Millennium II transmitter and its profile is automatically configured. No other platform can offer this range and flexibility.

Fixed Point Gas Detection

Primary advantages of the Net Safety Millennium II Series of fixed point gas detectors include:

- Extremely Low Power Consumption Allows Flexibility, Improves Performance, and Lowers Overall Costs
- Single, Dual-Channel, or BASIC Universal Transmitter Configurations Are Completely Interchangeable with our Field-proven Electrochemical, NE-MOS Solid State, Catalytic Bead, and Infrared Sensors
- Highly Robust Construction and Reliable Performance Designed for Conditions
- Fast Digital Communication between the Sensor and the Transmitter [2,000 ft (600 m) Separation]



[Download Product Data Sheet](#)

HEADQUARTERS

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